

AMENDMENTSIn the Claims

The following is a clean version of the entire set of pending claims (unamended claims appear in smaller print). In accordance with 37 CFR § 1.121(c)(1)(ii), attached is a marked up version of claims containing the newly introduced changes. The attached page is captioned **VERSION WITH MARKINGS TO SHOW CHANGES MADE**.

Please amend the claims as follows:

1. (Amended) A fuse assembly comprising:  
 a fuse element prepared in a substantially non-linear form, the fuse element  
 comprising at least two terminals, the at least two terminals comprising a first  
 terminal and a second terminal;  
 at least two conductive endcaps being coupled to the first terminal and the second  
 terminal; and  
 a fuse body comprising a dielectric material adapted to substantially enclose the  
 fuse element between the at least two endcaps, wherein  
 at least a portion of the dielectric material is positioned between an area  
 bounded by said fuse element in a substantially non-linear form and a  
 line connecting two ends of the fuse element, and  
 the fuse element is separated from said portion of the dielectric material by a  
 space along a length of said fuse element.

2. The fuse assembly of claim 1, wherein the non-linear form of the fuse element  
 is substantially a curve.

3. (Amended) The fuse assembly of claim 1, wherein the fuse element is  
 capable of experiencing arcing as a result of an opening  
 being created in at least a portion of the fuse element,

4 the opening having two ends, the dielectric material forces arcing between the two  
5 ends of the opening to traverse a path consistent with the non-linear form.

1 4. The fuse assembly of claim 3, wherein the at least portion of the dielectric  
2 material comprises a superior dielectric material.

1 5. The fuse assembly of claim 3, wherein the path is consistent with a shape of  
2 the at least portion of dielectric material.

1 6. The fuse assembly of claim 3, wherein the arcing causes formation of a  
2 conductive path along a surface of the at least portion of the dielectric material.

1 7. The fuse assembly of claim 6, wherein the conductive path is comprised of  
2 carbon.

1 8. The fuse assembly of claim 6, wherein the conductive path reduces an  
2 insulating value of the dielectric material.

1 9. The fuse assembly of claim 1, wherein at least a portion of the dielectric  
2 material is positioned between an area bounded by the prepared fuse element and a line  
3 connecting the at least two endcaps.

1 10. The fuse assembly of claim 9, wherein the at least portion of the dielectric  
2 material is positioned to impede arcing between the at least two endcaps.

1 11. The fuse assembly of claim 9, wherein the at least portion of the dielectric  
2 material comprises a superior dielectric material.

1 12. **(Amended)** The fuse assembly of claim 3, wherein forcing the arcing between  
2 the two ends of the opening to traverse the path introduces an increased amount of dielectric  
3 separation.

1           13.     The fuse assembly of claim 12, wherein the increased amount of dielectric  
2 separation is caused by an introduction of at least a portion of the dielectric material within a  
3 perimeter of the path.

1           14.     The fuse assembly of claim 12, wherein the path traversed is substantially a  
2 curve and forcing the arcing to follow the path along the curve introduces the increased  
3 amount of dielectric separation.

1           15.     (Amended) The fuse assembly of claim 3, wherein the opening is caused by  
2 passing an excessive current through the fuse element, the excessive current causing a  
3 meltdown of at least a portion of the fuse element.

1           16.     The fuse assembly of claim 15, wherein the meltdown causes formation of two  
2 ends of the at least the portion of the fuse element.

1           17.     (Amended) The fuse assembly of claim 3, wherein creating the opening in the  
2 fuse element causes an arc, the arc being formed between the two ends.

1           18.     (Amended) A method of reducing footprint of a fuse element, the method  
2 comprising:  
3           preparing the fuse element in a substantially non-linear form, the fuse element  
4           comprising at least two terminals, the at least two terminals comprising a  
5           first terminal and a second terminal, the footprint being reduced by  
6           adjusting distance between the first terminal and the second terminal;  
7           coupling the fuse element between at least two conductive endcaps coupled to the  
8           first and second terminals;  
9           enclosing the fuse element in a dielectric material, wherein  
10          at least a portion of said dielectric material is positioned between an area  
11          bounded by said fuse element in a substantially non-linear form and a  
12          line connecting two ends of the fuse element, and  
13          said fuse element is separated from said portion of said dielectric material by a

14 space along a length of said fuse element.

1 19. The method of claim 18, wherein the non-linear form of the fuse element is  
2 substantially a curve.

**Claim 20 has been cancelled.**

1 21. (Amended) The method of claim 18, wherein the at least portion of the  
2 dielectric material comprises a superior dielectric material.

1 22. (Amended) The method of claim 18, wherein the substantially non-linear  
2 form is consistent with a shape of the at least portion of dielectric material.

1 23. (Amended) The method of claim 18, wherein  
2 the fuse element is capable of experiencing arcing as a result of an opening being  
3 created in at least a portion of the fuse element,  
4 the opening having two ends,  
5 the dielectric material forces arcing between the two ends of the opening to  
6 traverse a path consistent with the non-linear form.

1 24. (Amended) The method of claim 23, wherein  
2 the arcing causes formation of a conductive path along a surface of at least portion  
3 of the dielectric material,  
4 the at least a portion of the dielectric material is positioned between an area  
5 bounded by the prepared fuse element and a line connecting two ends of  
6 the fuse element.

1 25. The method of claim 24, wherein the conductive path is comprised of carbon.

1 26. The method of claim 24, wherein the conductive path reduces an insulating  
2 value of the dielectric material.

1           27.    (Amended) The method of claim 24, wherein the forced arcing between the  
2   two ends of the opening to traverse the path introduces an increased amount of dielectric  
3   separation.

1           28.    The method of claim 27, wherein the increased amount of dielectric separation  
2   is caused by an introduction of at least a portion of the dielectric material within a perimeter of  
3   the path.

1           29.    The method of claim 23, wherein creating the opening is caused by passing an  
2   excessive current through the fuse element, the excessive current causing a meltdown of at  
3   least a portion of the fuse element.

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1           30.    The method of claim 29, wherein the meltdown causes formation of two ends  
2   of said at least the portion of the fuse element.

1           31.    The method of claim 18 further comprising:  
2           for a defined footprint adjusting height of the fuse element to adjust at least a  
3           portion of the dielectric material separating the at least two endcaps.

1           32.    The method of claim 31, wherein said at least portion of the dielectric material  
2   separating the at least two endcaps is in a form of a plate.

1           33.    (Amended) A method of increasing dielectric separation between at least two  
2   terminals of a fuse element that experience arcing, the method comprising:  
3           preparing the fuse element in a substantially non-linear form;  
4           coupling the fuse element between at least two conductive endcaps, the at least  
5           two conductive endcaps being coupled to the corresponding at least two  
6           terminals;  
7           enclosing the fuse element in a dielectric material, wherein  
8           at least a portion of the dielectric material is positioned between an area bounded by  
9           said prepared fuse element and a line connecting the at least two endcaps, and

10 said fuse element is separated from said portion of said dielectric material by a space  
11 along a length of said fuse element.

1 34. The method of claim 33, wherein  
2 the at least two terminals comprise a first terminal and a second terminal,  
3 the dielectric material separating the first terminal and the second terminal is in a  
4 form of a plate.

1 35. The method of claim 33, wherein the non-linear form of the fuse element is  
2 substantially a curve.

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/ **Claim 36 has been cancelled.**

1 37. The method of claim 36, wherein the at least portion of the dielectric material  
2 comprises a superior dielectric material.

1 38. The method of claim 36, wherein the substantially non-linear form is  
2 consistent with a shape of the at least portion of dielectric material.

1 39. **(Amended)** The method of claim 33, wherein  
2 the arcing causes formation of a conductive path along a surface of at least portion of  
3 the dielectric material.

1 40. The method of claim 39, wherein the conductive path is comprised of carbon.

1 41. The method of claim 39, wherein the conductive path reduces an insulating  
2 value of the dielectric material.

1 42. **(Amended)** The method of claim 33, wherein  
2 the fuse element experiences arcing as a result of an opening being created in at  
3 least a portion of the fuse element,  
4 the opening having two ends,

5 the dielectric material forces arcing between the two ends of the opening to  
6 traverse a path consistent with the non-linear form.

1 43. (Amended) The method of claim 42, wherein the forced arcing between the  
2 two ends of the opening to traverse the path introduces an increased amount of dielectric  
3 separation.

1 44. The method of claim 43, wherein the increased amount of dielectric separation  
2 is caused by an introduction of at least a portion of the dielectric material within a perimeter of  
3 the path.

1 45. The method of claim 42, wherein the path traversed is substantially a curve  
2 and the forced arcing follows the path along the curve thereby introducing the increased  
3 amount of dielectric separation.

1 46. The method of claim 42, wherein creating the opening is caused by passing  
2 an excessive current through the fuse element, the excessive current causing a meltdown of  
3 said at least the portion of the fuse element.

1 47. The method of claim 46, wherein the meltdown causes formation of two ends  
2 of said at least the portion of the fuse element.

1 48. (Amended) The method of claim 42, wherein creating the opening in said at  
2 least the portion of the fuse element causes an arc, the arc being formed between the two ends  
3 of the opening.

1 49. (Amended) A fuse comprising:  
2 a fuse element prepared in a substantially non-linear form, wherein at least a  
3 portion of the fuse element is capable of experiencing arcing as a result of  
4 excessive current flowing through the fuse element;  
5 means for increasing a dielectric separation to impede the arcing, wherein said  
6 means for increasing said dielectric separation is separated from said fuse

7 element by a space along a length of said fuse element.

1 50. The fuse of claim 49, wherein the fuse further comprises:  
2 the fuse element comprising at least two terminals, the at least two terminals  
3 comprising a first terminal and a second terminal; and  
4 at least two conductive endcaps, the at least two endcaps being coupled to the at  
5 least two terminals.

1 51. The fuse of claim 50, wherein the fuse element is enclosed by a dielectric  
2 material, wherein the dielectric material is adapted to substantially enclose the fuse element  
3 between the at least two endcaps.

1 52. The fuse of claim 51, wherein the means for increasing the dielectric  
2 separation comprises positioning at least a portion of the dielectric material between an  
3 area bounded by the prepared fuse element and a line connecting the at least two endcaps.

1 53. The fuse of claim 51, wherein the means for increasing the dielectric  
2 separation comprises forcing the arcing between the two endcaps to traverse a path  
3 consistent with a form of the dielectric material between the at least two endcaps.

1 54. The fuse of claim 52, wherein the at least portion of the dielectric material  
2 comprises a superior dielectric material.

1 55. The fuse of claim 52, wherein the arcing causes formation of a conductive  
2 path along a surface of the at least portion of the dielectric material.

1 56. The fuse of claim 52, wherein the at least portion of the dielectric material  
2 is positioned to impede arcing between the at least two endcaps.

1 57. The fuse of claim 55, wherein the conductive path is comprised of carbon.

1 58. The fuse of claim 55, wherein the conductive path reduces an insulating



2 value of the dielectric material positioned between the at least two endcaps.

1 59. The fuse of claim 49, wherein the excessive current causes a meltdown of  
2 at least a portion of the fuse element.

1 60. The fuse of claim 59, wherein the meltdown causes formation of two ends  
2 of the at least portion of the fuse element, the arcing occurring between the two ends.

1 61. The fuse of claim 60, wherein the means for increasing the dielectric  
2 separation comprises forcing the arcing between the two ends to traverse a path  
3 consistent with the non-linear form.

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1 62. The fuse of claim 60, wherein the means for increasing the dielectric  
2 separation comprises positioning at least a portion of the dielectric material between an  
3 area bounded by the prepared fuse element and a line connecting the two ends.

1 63. The fuse of claim 62, wherein the at least portion of the dielectric material  
2 comprises a superior dielectric material.

1 64. The fuse of claim 62, wherein the at least portion of the dielectric material  
2 is positioned to impede arcing between the two ends.

1 65. The fuse of claim 62, wherein the arcing causes formation of a conductive  
2 path along a surface of the at least portion of the dielectric material.

1 66. The fuse of claim 65, wherein the conductive path is comprised of carbon.

1 67. The fuse of claim 65, wherein the conductive path reduces an insulating  
2 value of the dielectric material positioned between the two ends.

1 68. The fuse of claim 49, wherein the non-linear form of the fuse element is  
2 substantially a curve.

1 69. (Amended) A method of impeding arcing, said arcing occurring across a  
2 gap formed in a fuse element by said arcing, the method comprising:  
3 creating the gap in the fuse element, the gap being created as a result of heat  
4 generated in response to excessive current flowing through the fuse  
5 element, the fuse element being prepared in a substantially non-linear  
6 form; and  
7 forcing the arcing across the gap to traverse a path consistent with the non-linear  
8 form, wherein  
9 said fuse element is enclosed by a dielectric material, and  
10 at least a portion of said dielectric material is positioned between an area  
11 bounded by said fuse element prepared in the substantially non-  
12 linear form and a line connecting two ends of said fuse element,  
13 the two ends being formed by said opening, wherein said portion  
14 of dielectric is separated from said fuse element by a space along a  
15 length of said fuse element.

1 70. The method of claim 69, wherein the non-linear form of the fuse element  
2 is substantially a curve.

**Claims 71 and 72 have been cancelled.**

1 73. (Amended) The method of claim 71, wherein the at least portion of the  
2 dielectric material comprises a superior dielectric material.

1 74. (Amended) The method of claim 71, wherein the path is consistent with a  
2 shape of the at least portion of dielectric material.

1 75. (Amended) The method of claim 71, wherein the arcing causes formation  
2 of a conductive path along a surface of the at least portion of the dielectric material.

1 76. The method of claim 75, wherein the conductive path is comprised of

2 carbon.

1 77. The method of claim 75, wherein the conductive path reduces an  
2 insulating value of the dielectric material.

1 78. The method of claim 69, wherein the fuse element comprises at least two  
2 terminals, the at least two terminals comprising a first terminal and a second terminal.

1 79. The method of claim 78, wherein the first terminal and the second  
2 terminal are coupled to at least two conductive endcaps.

1 80. The method of claim 79, wherein at least a portion of the dielectric  
2 material is positioned between an area bounded by the prepared fuse element and a line  
3 connecting the at least two endcaps.

1 81. The method of claim 80, wherein the at least portion of the dielectric  
2 material is positioned to impede arcing between the at least two endcaps.

1 82. The method of claim 80, wherein the at least portion of the dielectric  
2 material comprises a superior dielectric material.

1 83. The method of claim 80, wherein the path is consistent with a shape of the  
2 at least portion of dielectric material.

1 84. The method of claim 80, wherein the arcing causes formation of a  
2 conductive path along a surface of the at least portion of the dielectric material.

1 85. The method of claim 84, wherein the conductive path is comprised of  
2 carbon.

1 86. The method of claim 84, wherein the conductive path reduces an  
2 insulating value of the dielectric material.

1           87.    The method of claim 69, wherein forcing the arcing across the gap to  
2    traverse the path introduces an increased amount of dielectric separation.

1           88.    The method of claim 87, wherein the increased amount of dielectric  
2    separation is caused by an introduction of a dielectric material within a perimeter of the  
3    path.

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1           89.    The method of claim 87, wherein the path traversed is substantially a  
2    curve and forcing the arcing to follow the path along the curve introduces the increased  
3    amount of dielectric separation.

1           90.    The method of claim 69, wherein the heat generated causes a meltdown of  
2    at least a portion of the fuse element.

1           91.    The method of claim 90, wherein the meltdown causes creation of the gap.